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Tamara Alcaraz

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Mingqi ZHAO et al.

Serial No.:

09/939,327

Filing Date:

August 24, 2001

For:

MICROFLUIDIC CHIP HAVING

INTEGRATED ELECTRODES

SUBMISSION OF DRAWINGS

Box Missing Parts Assistant Commissioner for Patents Washington, D.C. 20231

Dear Sir:

Enclosed are 19 sheet(s) of drawings in connection with the above-identified application.

Respectfully submitted,

Dated:

December/7, 2001

By:

Thomas E. Ciotti Registration No. 21,013

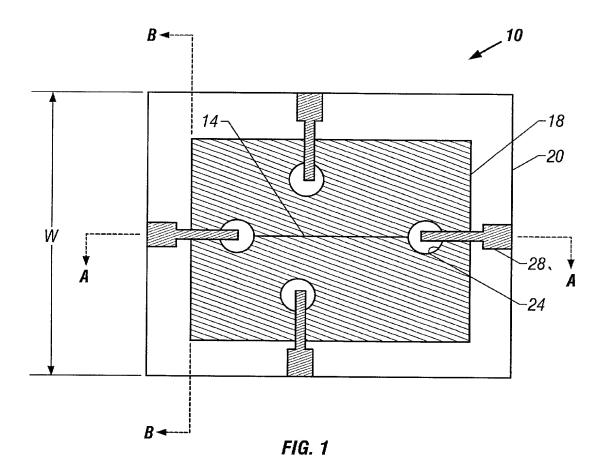
Morrison & Foerster LLP 755 Page Mill Road

Palo Alto, California 94304-1018

Telephone: (650) 813-5702 Facsimile: (650) 494-0792 Docket No.: 427922000920

ELECTRODES Inventor: Mingqi ZHAO et al. Application No.: 09/939,327

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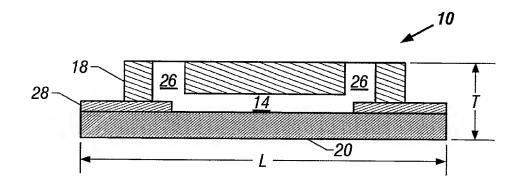


FIG. 2

Title: MICROFLUIDIC CHIP HAVING INTEGRATED ELECTRODES
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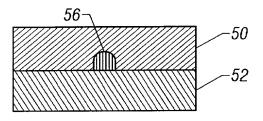


FIG. 3A

70 <

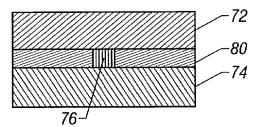


FIG. 3B

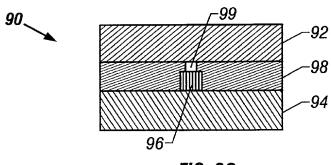


FIG. 3C

Title. MICROFLUIDIC CHIP HAVING INTEGRATED ELECTRODES

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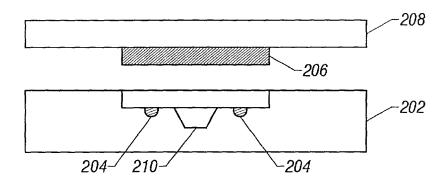


FIG. 4A

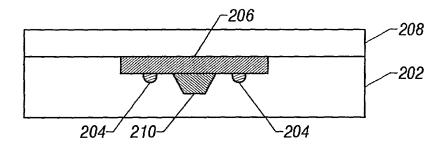
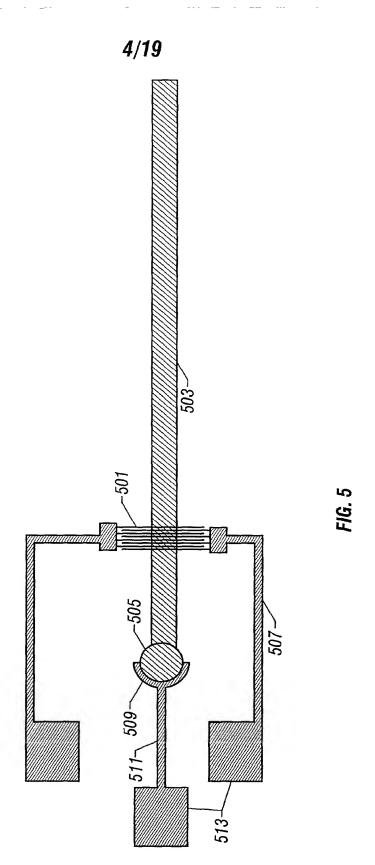


FIG. 4B

Title: MICROFLUIDIC CHIP HAVING INTEGRATED ELECTRODES
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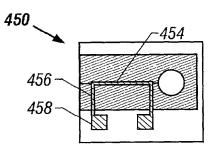


FIG. 6A

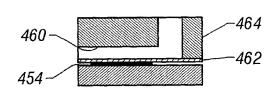


FIG. 6B

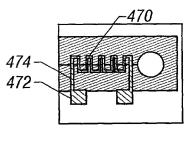


FIG. 6C

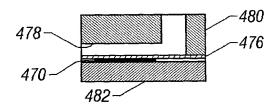


FIG. 6D

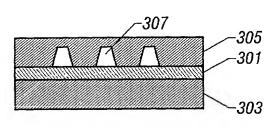


FIG. 7A

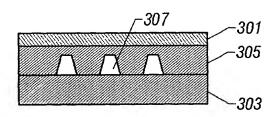


FIG. 7B

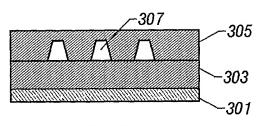
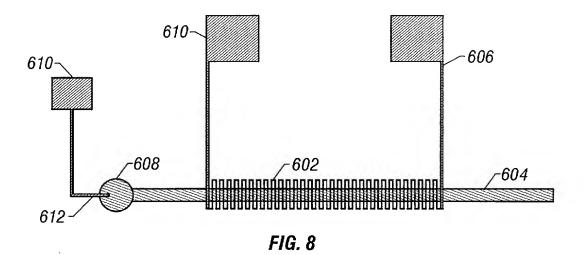


FIG. 7C

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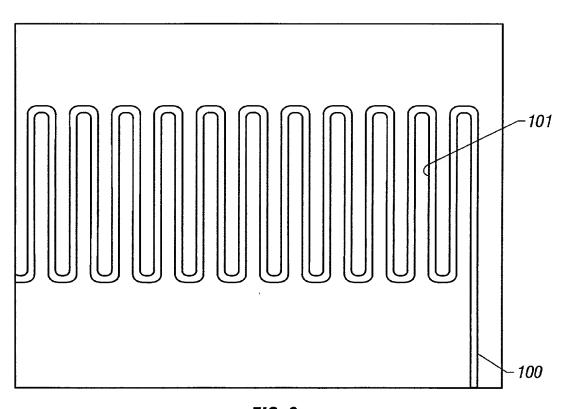


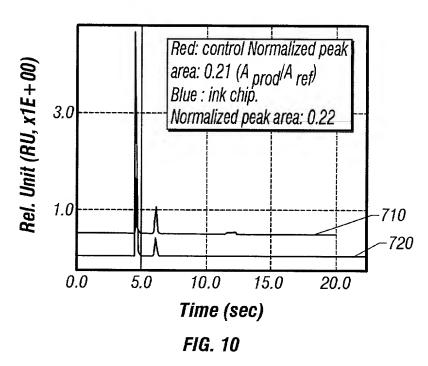
FIG. 9

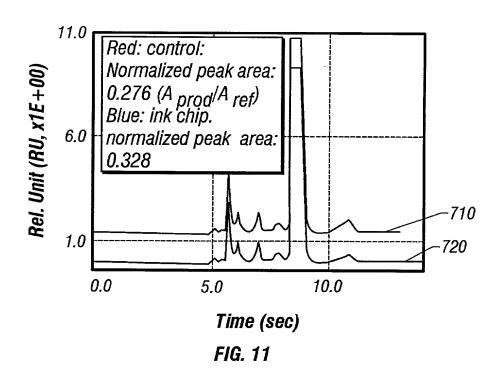
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ELECTRODES

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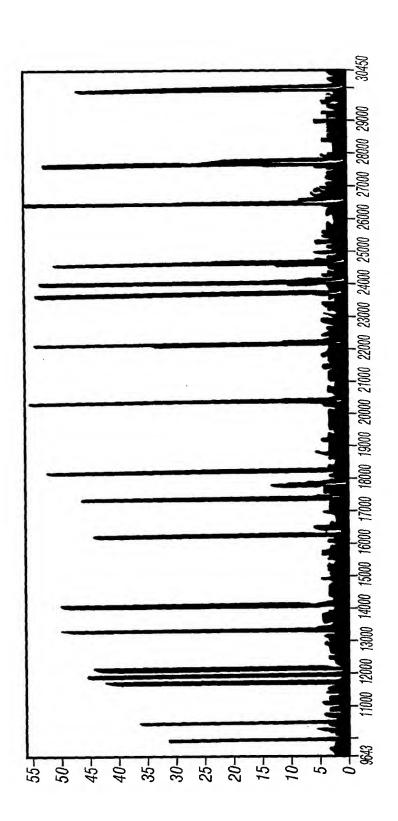
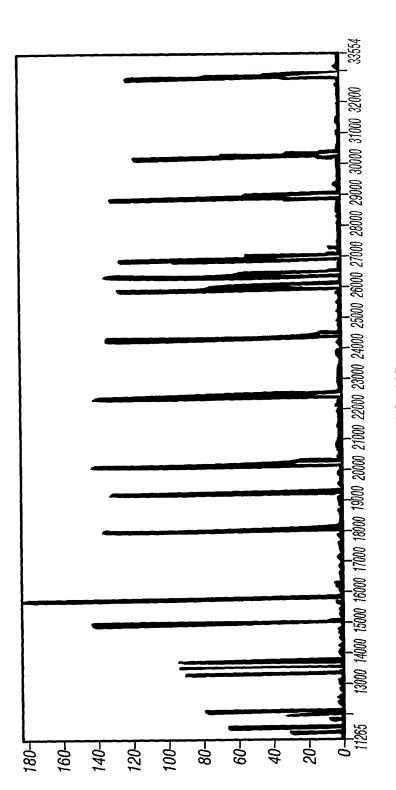


FIG. 12A

Title. MICROFLUIDIC CHIP HAVING INTEGRATED ELECTRODES

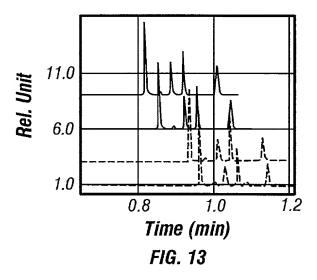
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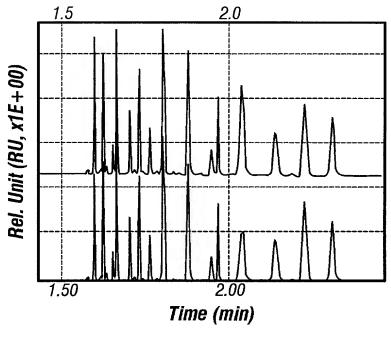


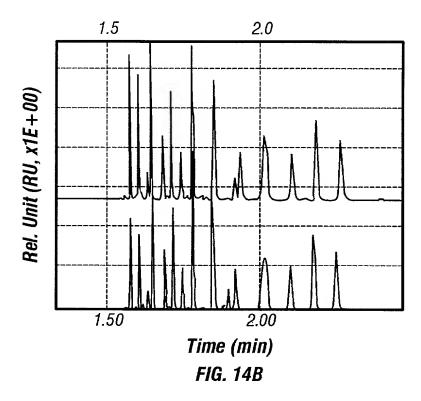
FIG. 14A

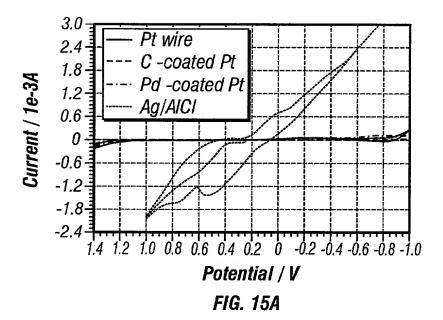
ELECTRODES

Inventor: Mingqi ZHAO et al. Application No.: 09/939,327 Docket No.: 427922000920

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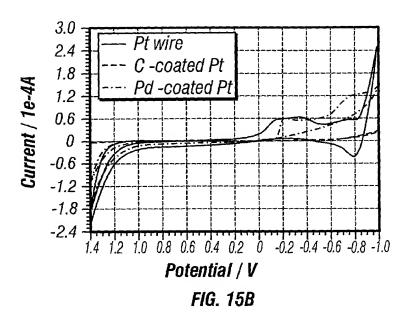
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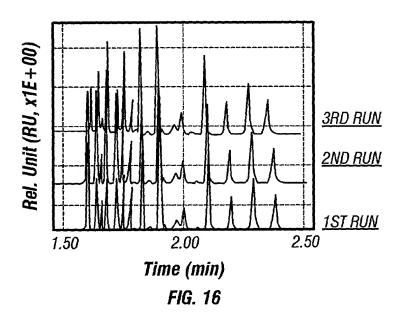




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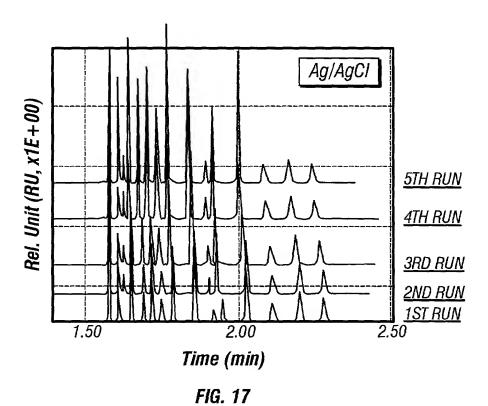


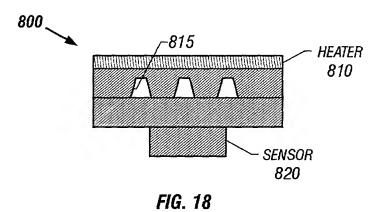
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REPEATED UNIT HEATER, $R = 760\Omega$

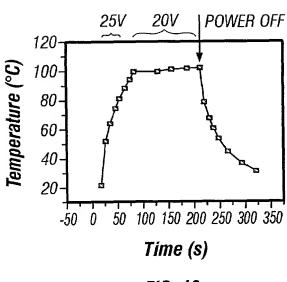
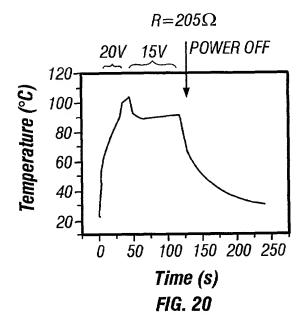


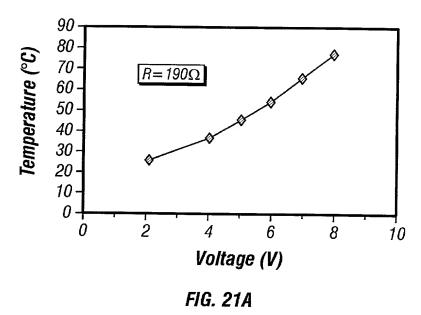
FIG. 19



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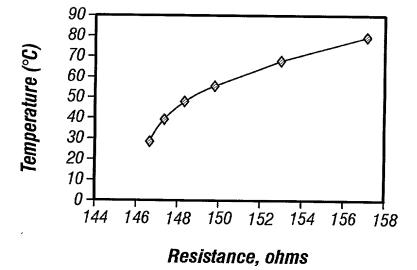


FIG. 21B

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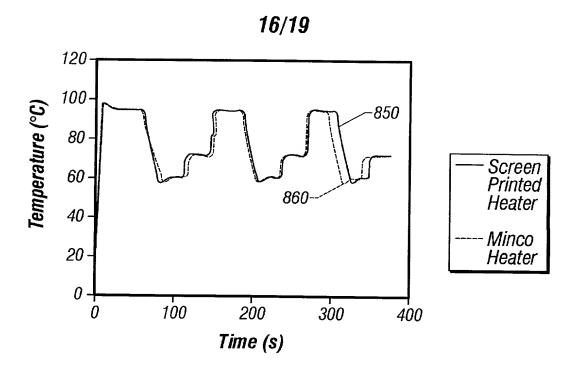
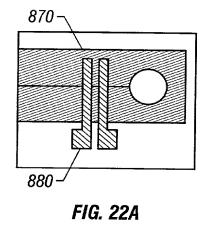


FIG. 21C



874-876-FIG. 22B

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ELECTRODES

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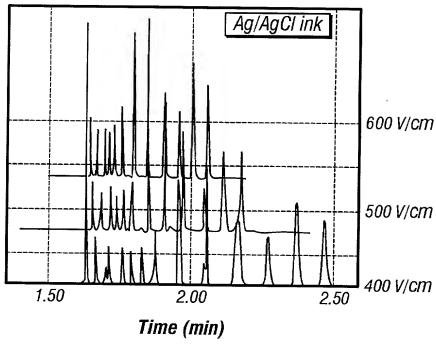


FIG. 23

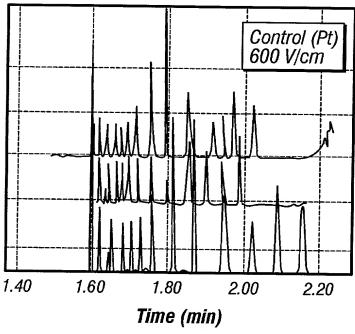


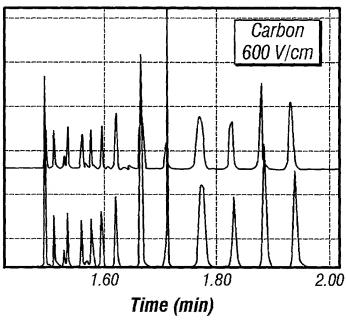
FIG. 24A

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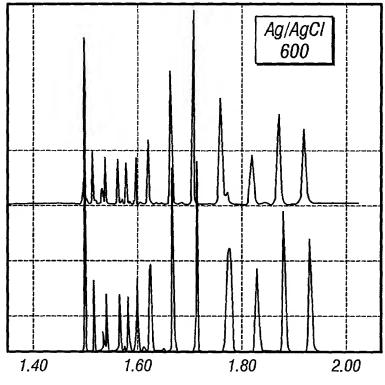
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riiie (iiiiii) FIG. 24B



Time (min)

FIG. 24C

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Resolution	CN	Ink		0.70	1.18	1.30	1.44	0.30	13.70	90.0	9.03	6.73	6.52	0.27	2.93
		Pŧ		25.92	19.80	27.73	13.48	44.60	70.08	63.05	33.52	30.19	47.68	45.94	29.69
	age	Pt Ink		0.81	1.08	1.04	0.89	0.86	0.81	1.14	1.07	1.03	1.00	1.04	0.92
	Average	Pt		1.01	1.36	1.38	1.05	1.32	1.51	2.04	2.17	1.99	1.59	1.72	1.57
Half Peak Width	CV	Ink	4.60	2.79	0.98	2.40	4.94	2.82	2.42	1.91	6.73	29.77	21.75	10.72	6.85
		Pt Ink Pt Ink Pt Ink Pt Ink Pt Ink Pt Ink	33.81	1.58 1.51 6.80 0.19 0.27 0.22 1.61 2.45 0.15 0.13 25.18 2.79 1.01 0.81 25.92 0.70	1.61 1.54 7.08 0.18 0.34 0.27 4.80 3.40 0.17 0.15 27.95 0.98 1.36 1.08 19.80 1.18	1.63 1.56 7.40 0.23 0.30 0.25 3.57 2.77 0.21 0.18 30.71 2.40 1.38 1.04 27.73 1.30	1.65 1.58 7.49 0.22 0.26 0.22 3.28 1.57 0.17 0.16 23.50 4.94 1.05 0.89 13.48 1.44	25.84	1.70 1.62 7.98 0.22 0.48 0.41 0.29 5.20 0.23 0.20 27.30 2.42 1.51 0.81 70.08 13.70	26.68	1.80 1.71 8.85 0.37 0.63 0.59 5.03 6.99 0.10 0.08 34.24 6.73 2.17 1.07 33.52	1.86 1.77 9.45 0.72 1.54 1.42 2.98 1.25 0.76 0.53 30.56 29.77 1.99 1.03 30.19 6.73	1.92 1.82 10.07 0.50 0.75 0.71 0.64 1.02 0.49 0.46 39.83 21.75 1.59 1.00 47.68	1.98 1.87 10.64 0.41 1.20 1.18 0.33 0.23 0.47 0.42 37.31 10.72 1.72 1.04 45.94	35.82
	Average	Ink	0.12	0.13	0.15	0.18	0.16	0.18	0.20	0.22	0.08	0.53	0.46	0.42	0.42
	Aver	Pţ	0.15	0.15	0.17	0.21	0.17	0.20	0.23	0.25	0.10	92.0	0.49	0.47	0.49
Normalized Peak Height		12K	4.74	2.45	3.40	2.77	1.57	2.37	5.20	0.54	6.99	1.25	1.02	0.23	0
	2	Pt	2.81	1.61	4.80	3.57	3.28	4.16	0.29	4.52	5.03	2.98	0.64	0.33	0.00
	Average	17K	0.56	0.22	0.27	0.25	0.22	0.27	0.41	0.88	0.59	1.42	0.71	1.18	1.00
	Ave	Pt	69.0	0.27	0.34	0.30	0.26	0.30	0.48	1.01	0.63	1.54	0.75	1.20	1.00
Migration Time (min)	ΛO	Ink	0.19	0.19	0.18	0.23	0.22	0.22	0.22	0.21	0.37	0.72	0.50	0.41	0.44
		Pţ	6.61	6.80	7.08	7.40	7.49	7.73	7.98	8.41	8.85	9.45	10.07	10.64	11.08
	Average	ž	1.50	1.51	1.54	1.56	1.58	1.60	1.62	1.67	1.71	1.77	1.82	1.87	1.92
		Pt	1.56 1.50 6.61 0.19 0.69 0.56 2.81 4.74 0.15 0.12 33.81 4.60	1.58	1.61	1.63	1.65	1.67 1.60 7.73 0.22 0.30 0.27 4.16 2.37 0.20 0.18 25.84 2.82 1.32 0.86 44.60 0.90	1.70	1.75 1.67 8.41 0.21 1.01 0.88 4.52 0.54 0.25 0.22 26.68 1.91 2.04 1.14 63.05 0.06	1.80	1.86	1.92	1.98	2.04 1.92 11.08 0.44 1.00 1.00 0.00 0 0.49 0.42 35.82 6.85 1.57 0.92 29.69 2.93
eTag Probes (-FC)			163	158	33	56	25	174	1	187	188	189	190	191	192

FIG. 25